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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/788,474	02/21/2001	Masatoshi Shiouchi	1359.1041	6203

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EXAMINER

PATEL, ASHOKKUMAR B

ART UNIT PAPER NUMBER

2154

DATE MAILED: 06/28/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/788,474

Applicant(s)

SHIOUCHI ET AL.

Examiner

Ashok B. Patel

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8 and 11-25 is/are rejected.
- 7) ☒ Claim(s) 9 and 10 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 2/21/2001.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

### DETAILED ACTION

1. Application Number 09/788, 474 was filed on 02/21/2001. Claims 1-25 are subject to examination.

#### ***Claim Rejections - 35 USC § 101***

2. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

3. Claim 23 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

- a. Claim 23 recites A computer-readable recording medium storing a processing program for brokering information communication among agents present on a network, comprising: storing a policy that is a collection of rules containing a rule representing a relationship between attributes of an agent and a role assigned in accordance with the attributes, and providing a role in accordance with the attributes of each agent based on the policy; storing the assigned role and conditions for executing the contents of the role; executing corresponding contents of a role in a case where the conditions for executing the contents of the role are satisfied; controlling the virtual communication channel so that each agent exchanges a message in accordance with the assigned role based on the policy, wherein is absent computer readability or execution.

#### ***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1-6, 11-16, and 22-25 are rejected under 35 U.S.C. 102(e) as being anticipated Hodjat et al. (hereinafter Hodjat)(US 6, 144, 989).

**Referring to claim 1,**

The reference teaches an agent collaboration system for connecting agents to each other through a virtual communication channel (Abstract), each agent on the virtual communication channel (Fig.3, element 310) comprising:

a policy storing part for storing a policy that is a collection of rules containing a rule representing a relationship between attributes of the agent and a role assigned in accordance with the attributes; (Fig. 3, element 322, col. 7, lines 34-36)

a role assignment part having the policy storing part, for providing a role in accordance with the attributes of the agent based on the policy; (Fig.3, element 322, col.7, lines 36-41)

a role-execution condition storing part for storing the role assigned by the role assignment part and conditions for executing contents of the role; and a processing execution part for executing corresponding contents of a

role in a case where the execution conditions for the contents of the role are satisfied (Fig.3, element 316, col. 8, lines 65-67 and col. 9, lines 1-14)

wherein the agents collaborate with each other through the virtual communication channel based on the policy.(col.4, lines 44-67 and col.5, lines 1-5).

**Referring to claim 2,**

The reference teaches an agent collaboration system according to claim 1, wherein the policy comprises, in addition to the rule representing a relationship between attributes of the agent and a role assigned in accordance with the attributes, at least one of a rule representing a relationship between attributes of a data object and an agent's reaction to operation with respect to the data object, a rule representing a relationship between a collection of the roles and a collection of the reactions, and a rule representing a relationship between the collections of the roles. (col.7, lines 45-61).

**Referring to claim 3,**

The reference teaches an agent collaboration system according to claim 1, wherein, in each agent, contents of a policy stored in the policy storing part is updated, and deletion/alteration of the rules, and addition of a new rule are conducted. (col.7, lines 51-53)

**Referring to claim 4,**

4. An agent collaboration system according to claim 1, wherein the processing execution part previously holds a processing function module, and selectively enables the processing function module in the processing execution part, based on the contents of a role held by the role-execution condition holding

part, thereby installing a processing function. (col.8, lines 65-67)

**Referring to claim 5,**

The reference teaches an agent collaboration system according to claim 4, wherein, in installment of a processing function in the processing execution part, in a case where the processing function module required for execution of the contents of a role is not previously held, the system receives a required processing function module from a resource on a network through the virtual communication channel to use it. (col.9, lines 20-33).

**Referring to claim 6,**

The reference teaches an agent collaboration system according to claim 1, wherein a policy generated by an agent is distributed to another agent, the agent having received the distributed policy obtains a role in accordance with attributes of the agent using the role assignment part based on the policy, thereby installing the processing execution part, and a virtual communication channel is formed among agents having the distributed policy in common. (col. 8, lines 20-29).

**Referring to claim 11,**

The reference teaches an agent collaboration system according to claim 1, wherein each agent is capable of selecting participation or nonparticipation on the virtual communication channel. (col.4, lines 51-55).

**Referring to claims 12, 13, 14 and 15,**

The reference teaches an agent collaboration system according to claim 1, wherein the policy storing part generates and manages independent policies, and generates virtual

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private communities independently among agents exchanging information based on each policy on the virtual communication channel and , wherein the policy storing part integrates policy sets selected from policies independently generated and managed, and generates virtual private communities among agents exchanging information based on the integrated policy on the virtual communication channel, and wherein the policy storing part divides the policy into independent policies, and generates virtual private communities independently among agents exchanging information based on the respective policies on the virtual communication channel after policy division and, wherein the policy storing part stores a first policy and a second policy belonging to the first policy, in which a new rule is added to the first policy, and a virtual private community among agents based on the second policy are generated in a nested manner on a virtual private community among agents based on the first policy. (col.10, lines 10-44).

**Referring to claim 16,**

The reference teaches an agent collaboration system according to claim 1, wherein an agent making a request with respect to another agent transmits request information having LABEL (reaction to the request) information based on the policy, the agent that receives the request information and responds to the request information transmits response information having LABEL information based on the policy, and the agent that transmits the request receives response information having the LABEL information based on the policy.(col. 7, lines 21-33, col. 8, lines 20-29).

**Referring to claim 22,**



The reference teaches an agent collaboration method for brokering information communication among agents present on a network, comprising, in each agent (Fig.3, element 310) on the virtual communication channel:

storing a policy that is a collection of rules containing a rule representing a relationship between attributes of an agent and a role assigned in accordance with the attributes, and assigning a role in accordance with the attributes of each agent based on the policy (Fig.3, element 322, col. 7, lines 34-41)

storing the assigned role and conditions for executing contents of the role; executing corresponding contents of a role in the case where execution conditions for the contents of the role are satisfied: (Fig. 3, element 316, col.8, lines 65-67 and col.9, lines 1-14) and

allowing the agents to collaborate with each other through the virtual communication channel based on the policy. (col.4, lines 44-67 and col.5, lines 1-5).

**Referring to claim 23,**

Claim 23 is a claim to a computer-readable recording medium storing a processing program for the agent collaboration method of claim 22. Therefore, claim 23 is rejected for the reasons set forth for claim 22.

**Referring to claim 24,**

The reference teaches a virtual communication channel for brokering information communication among agents present on a network (col. 10, lines 10-11), which is controlled based on a policy that is a collection of rules containing a rule representing a relationship between attributes of an agent and a role assigned in accordance

with the attributes(col. 10, lines 11-13), allows each agent to have a role in accordance with the attributes thereof based on the policy, and virtually connects the operating agents to each other based on the policy, and brokers collaboration of each agent through execution of the contents of the role. (col. 10, lines 14-29).

**Referring to claim 25,**

The reference teaches a virtual private community provided by a virtual communication channel for brokering information communication among agents present on a network (col. 10, lines 10-11),, which is controlled based on a policy that is a collection of rules containing a rule representing a relationship between attributes of an agent (col. 10, lines 11-13), and a role assigned in accordance with the attributes, allows each agent to have a role in accordance with the attributes thereof based on the policy, and virtually connects the operating agents to each other based on the policy, and brokers collaboration of each agent through execution of the contents of the role (col. 10, lines 14-29).

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 7, 8, 17-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hodjat et al. (hereinafter Hodjat)(US 6, 144, 989) in view of Gupta et al. (hereinafter Gupta)(US 6, 513, 059)

**Referring to claim 7,**

Keeping in mind the teachings of the reference Hodjat as stated above, the reference fails to teach wherein a policy repository storing the policy is provided on the virtual communication channel, and each agent obtains a required policy from the policy repository and stores it in the policy storing part. The reference Gupta teaches the system and method for facilitating exchange of information on a computer network such as internet.(Abstract). The reference also teaches that the system provides one or more context trees, with each tree including two or more connected nodes, each node being associated with one or more selected node objects. Associated with each node is a blackboard for receiving and making available for reading, messages concerning the node object, a knowledge base containing information, facts, constraints and-or rules (Rules) concerning the node object, and an inference engine providing at least one logical rule that can be used to infer a logical conclusion based on at least one Rule in the knowledge base. (Abstract). The reference also teaches that an Awit's (agent's) activity and knowledge at a context node (a policy repository storing the policy) can be decoupled. And provides change notification for the awits that subscribe to that node. (col.4, lines 64-67 and col.5, lines 1-4).( each agent obtains a required policy from the policy repository and stores it in the policy storing part.) Therefore, it would have been obvious to one having ordinary skill in the art at the time of invention was made to

modify and enhance Hodjat by adding the functionality of Gupta's blackboard such that Hodjat's agent's interpretation policy unit derives the agents responsibility on the fly from the blackboard providing an agent with guidelines for accomplishing one or more tasks and allowing the agent to work independently or collaboratively with one or more other agents; the user does not exercise complete control and may, but need not, monitor the agent's progress. An agent relies upon indirect management as taught by Gupta.

**Referring to claim 8,**

Keeping in mind the teachings of the reference Hodjat as stated above, the reference fails to teach wherein an authentication entity is provided on the virtual communication channel, and the authentication entity authenticates access right of each agent to the virtual communication channel, and contents of a role held by the role-execution condition holding part of each agent. The reference Gupta teaches the system and method for facilitating exchange of information on a computer network such as internet.(Abstract). The reference also teaches a node runtime frame work (authentication entity is provided on the virtual communication channel) supporting public key encryption and signing (authentication) of messages and Awits.(col.6, lines 11-18) (an authentication entity is provided on the virtual communication channel, and the authentication entity authenticates access right of each agent to the virtual communication channel, and contents of a role held by the role-execution condition holding part of each agent.) Therefore, it would have been obvious to one having ordinary skill in the art at the time of invention was made to modify and enhance Hodjat

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by adding the functionality of Gupta's node runtime framework such that Hodjat's interpretation policy unit derives the authentication of the agents from the node framework and allowing the agent to work independently or collaboratively with one or more other agents; the user does not exercise complete control and may, but need not, monitor the agent's progress. An agent relies upon indirect management as taught by Gupta..

**Referring to claims 17, 18 and 19,**

Keeping in mind the teachings of the reference Hodjat as stated above, although the reference teaches that agents can be replaced at run-time (col.10, lines 45-46), the reference fails to teach wherein a role held by the role-execution condition storing part has an expiration date, and invalidates the role when the expiration date has come, and wherein the LABEL information has an expiration date, and a message having the LABEL information is ignored in each agent when the expiration date has come. and, whereon the virtual communication channel has an expiration date, and the virtual communication channel is self-destroyed when the expiration date has come. The reference Gupta teaches the node framework providing (a) maintain top-level context tree by adding/deleting concept sub-trees on request from application domain agents; (b) manage context node system by controlling blackboard operations associated with the node; (c) pass messages up and down the tree; (d) support persistent Awits state and persistent messages; (e) support Awits mobility among context nodes; and (f) support public key encryption and signing (authentication) of messages and Awits. (col. 6, lines 10-19). The reference Gupta teaches an Awit is an active agent that can be

programmed on the fly and that can create and assign tasks to other Awits, using a consistent agent programming language referred to as ASpeak. ASpeak normalizes user or application or system performatives (assigned tasks and responsibilities) in a consistent language, manages life cycles of Awits, and delegates authority. (col.6, lines 52-58). Thereby, the reference teaches a role held by the role-execution condition storing part has an expiration date, and invalidates the role when the expiration date has come (manages life cycles of Awits), and as such the agent ceases to exist, so does its reaction and the communication channel. Therefore, it would have been obvious to one having ordinary skill in the art at the time of invention was made to modify and enhance Hodjat by using Gupta's ASpeak such that Hodjat's agent's life cycle can be managed and allowing the agent to work independently or collaboratively with one or more other agents; the user does not exercise complete control and may, but need not, monitor the agent's progress. An agent relies upon indirect management as taught by Gupta..

**Referring to claims 20 and 21,**

Keeping in mind the teachings of the reference Hodjat as stated above, the reference fails to teach wherein an unauthorized access detecting part for detecting unauthorized access to the virtual communication channel is provided on the virtual communication channel or the agent, and as a result of that unauthorized access to the virtual communication channel is detected by the unauthorized access detecting part, each agent cancels connection to the virtual communication channel, thereby dynamically eliminating the virtual communication channel. And , wherein each agent

receives a request for destruction of the virtual communication channel from either one of the agents on the virtual communication channel, and cancels connection to the virtual communication channel, thereby dynamically eliminating the virtual communication channel. The reference Gupta teaches the node framework providing (a) maintain top-level context tree by adding/deleting concept sub-trees on request from application domain agents; (b) manage context node system by controlling blackboard operations associated with the node; (c) pass messages up and down the tree; (d) support persistent Awits state and persistent messages; (e) support Awits mobility among context nodes; and (f) support public key encryption and signing (authentication) of messages and Awits. (col. 6, lines 10-19). Thereby, the reference teaches an unauthorized access detecting part for detecting unauthorized access to the virtual communication channel is provided on the virtual communication channel or the agent, and as a result of that unauthorized access to the virtual communication channel is detected by the unauthorized access detecting part, each agent cancels connection to the virtual communication channel, thereby dynamically eliminating the virtual communication channel. Thereby, the reference also teaches the communication among the agents. Therefore, it would have been obvious to one having ordinary skill in the art at the time of invention was made to modify and enhance Hodjat by using Gupta's frame work such that unauthorized access can be detected and communicated to participating agents to not to participate anymore. Thus the system can be managed and allowing the agent to work independently or collaboratively with one or more other agents; the user does not exercise complete control and may, but

need not, monitor the agent's progress. An agent relies upon indirect management as taught by Gupta..

### ***Double Patenting***

8. A rejection based on double patenting of the "same invention" type finds its support in the language of 35 U.S.C. 101 which states that "whoever invents or discovers any new and useful process ... may obtain a patent therefor ..." (Emphasis added). Thus, the term "same invention," in this context, means an invention drawn to identical subject matter. See *Miller v. Eagle Mfg. Co.*, 151 U.S. 186 (1894); *In re Ockert*, 245 F.2d 467, 114 USPQ 330 (CCPA 1957); and *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970).

A statutory type (35 U.S.C. 101) double patenting rejection can be overcome by canceling or amending the conflicting claims so they are no longer coextensive in scope. The filing of a terminal disclaimer cannot overcome a double patenting rejection based upon 35 U.S.C. 101.

9. Claims 1-9, 10, 11, 12-21, 22-24 are provisionally rejected under 35 U.S.C. 101 as claiming the same invention as that of claims 1-9, 11, 10, 12-21, 28-30 of copending Application No. 10/230, 164. This is a provisional double patenting rejection since the conflicting claims have not in fact been patented.

### ***Allowable Subject Matter***

**Referring to claims 9 and 10,**

Claims 9 and 10 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

### ***Conclusion***

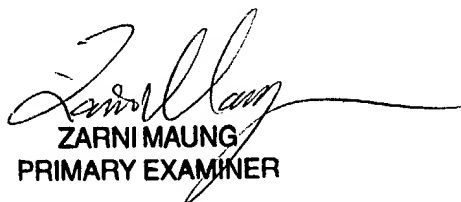
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ashok B. Patel whose telephone number is (703) 305-2655. The examiner can normally be reached on 8:00am-5:00pm.



If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John A Follansbee can be reached on (703) 305-8498. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Abp  
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ZARNI MAUNG  
PRIMARY EXAMINER